



NOTICE OF ALLOWANCE AND FEE(S) DUE

29855 7590 06/26/2008

WONG, CABELLO, LUTSCH, RUTHERFORD & BRUCCULERI,
L.L.P.
20333 SH 249
SUITE 600
HOUSTON, TX 77070

EXAMINER: GREY, CHRISTOPHER P
ART UNIT: 2616
PAPER NUMBER:
DATE MAILED: 06/26/2008

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

09/872,412 06/01/2001 David C. Banks 112-0030US 2661

TITLE OF INVENTION: LINK TRUNKING AND MEASURING LINK LATENCY IN FIBRE CHANNEL FABRIC

Table with 7 columns: APPLN. TYPE, SMALL ENTITY, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE

nonprovisional NO \$1440 \$0 \$0 \$1440 09/26/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

29855 7590 06/26/2008

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

WONG, CABELLO, LUTSCH, RUTHERFORD & BRUCCULERI
 L.L.P.
 20333 SH 249
 SUITE 600
 HOUSTON, TX 77070

Certificate of Mailing or Transmission
 I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,412	06/01/2001	David C. Banks	112-0030US	2661

TITLE OF INVENTION: LINK TRUNKING AND MEASURING LINK LATENCY IN FIBRE CHANNEL FABRIC

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$0	\$0	\$1440	09/26/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
GREY, CHRISTOPHER P	2616	370-386000

<p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</p> <p><input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.</p> <p><input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.</p>	<p>2. For printing on the patent front page, list</p> <p>(1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____</p> <p>(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____</p> <p>3 _____</p>
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3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE _____ (B) RESIDENCE: (CITY AND STATE OR COUNTRY) _____

Please check the appropriate assignee category or categories (will not be printed on the patent) : Individual Corporation or other private group entity Government

<p>4a. The following fee(s) are submitted:</p> <p><input type="checkbox"/> Issue Fee</p> <p><input type="checkbox"/> Publication Fee (No small entity discount permitted)</p> <p><input type="checkbox"/> Advance Order - # of Copies _____</p>	<p>4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)</p> <p><input type="checkbox"/> A check is enclosed.</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p><input type="checkbox"/> The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).</p>
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5. Change in Entity Status (from status indicated above)

a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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Table with columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
Rows: 09/872,412 06/01/2001 David C. Banks 112-0030US 2661
29855 7590 06/26/2008
WONG, CABELLO, LUTSCH, RUTHERFORD & BRUCCULERI, L.L.P.
20333 SH 249 SUITE 600 HOUSTON, TX 77070
EXAMINER GREY, CHRISTOPHER P
ART UNIT 2616 PAPER NUMBER
DATE MAILED: 06/26/2008

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 697 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 697 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No.	Applicant(s)	
09/872,412	BANKS ET AL.	
Examiner	Art Unit	
CHRISTOPHER P. GREY	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1. This communication is responsive to the appeal brief filed on May 20, 2008.
- 2. The allowed claim(s) is/are 1-7, 10-14, 20-28, 31-45, renumbered according to index of claims.
- 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some* c) None of the:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____ .
 - 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- 4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 - 5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
- 6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1. Notice of References Cited (PTO-892)
- 2. Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
- 4. Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5. Notice of Informal Patent Application
- 6. Interview Summary (PTO-413), Paper No./Mail Date _____ .
- 7. Examiner's Amendment/Comment
- 8. Examiner's Statement of Reasons for Allowance
- 9. Other _____.

/Aung S. Moe/
SPE 2616

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Keith Lutsch on June 11, 2008.

The application has been amended as follows:

a. Claim 20 has been cancelled and replaced with the following:

20. (Currently Amended) A communication network system, comprising:
at least a first switch and a second switch communicatively coupled together by a plurality of links;

~~a group including selected ones of the links;~~

a plurality of at least first and second ports, the first ports being coupled to the first switch and the second ports being coupled to second switch, each of the selected ones of the links having a pair of ends coupled to corresponding ones of the first ports and the second ports;

grouping logic to determine if a new port selected from the first and second ports qualifies to have the associated link join a group and adding the link associated with the new port to the group in response to determining that the new port qualifies; and

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a pair of transmit and receive ports selected respectively from one of the first ports associated with a link in the group, the transmit port routing frames received at the first switch across the group to the second switch.

b. Claim 31 has been cancelled and replaced with the following:

31. (Currently Amended) In a communication network system having at least a first switch and a second switch communicatively coupled together by a plurality of links, the first switch having at least a plurality of first ports, and the second switch having at least a plurality of second ports, each of the links communicatively coupling one of the first ports to a corresponding one of the second ports, a method for transmitting frames from the first switch to the second switch, the method comprising:

selecting a new port from the plurality of first ports;

adding the new port to a trunked group in response to determining that the new port qualifies as a trunking port;

receiving frames for transmission to the second switch at the first switch in order;

queuing the received frames for transmission to the second switch;

evenly distributing the queued frames between the ~~plurality of first ports~~ in the trunked group; and

transmitting the queued frames from the plurality of first ports in the trunked group to the ~~plurality of~~ corresponding second ports so that the frames

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are received at the ~~plurality of~~ corresponding second ports in order as received at the first switch.

c. Claim 35 has been cancelled and replaced with the following:

35. (Currently Amended) A system for transmitting frames between two network devices, the system comprising:

a first network device having ~~two~~ a plurality of first ports;

a second network device having ~~two~~ a plurality of second ports; and

~~two~~ a plurality of links connecting said ~~two~~ plurality of first ports of said first network device to corresponding of said ~~two~~ plurality of second ports of said second network device, ~~and~~

wherein said first network device includes:

_____ grouping logic to determine if a new port selected from said plurality of first ports qualifies as a trunking port and adding said new port to a trunked group if said new port qualifies as a trunking port;

_____ queuing logic for queuing frames to be transmitted to said second network device;

_____ distribution logic for evenly distributing the queued frames between said ~~two~~ first ports in said trunked group; and

_____ transmitting logic for transmitting the queued frames from said ~~two~~ first ports in said trunked group over said ~~two~~ plurality of links so that frames are

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received at said ~~two~~ corresponding second ports of said second network device in order.

d. Claim 36 has been cancelled and replaced with the following:

36. (Currently Amended) The system of claim 35, wherein said first and second network devices include:

cooperating logic to determine the skew value between said ~~two~~ plurality of links connecting said plurality of first and second ports, and

wherein said transmitting logic uses said skew value to control timing of the transmission of the frames.

e. Claim 38 has been cancelled and replaced with the following:

38. (Currently Amended) The system of claim 36, wherein said first and second network devices are Fibre Channel devices and wherein said ~~two~~ plurality of links are Fibre Channel links.

f. Claim 39 has been cancelled and replaced with the following:

39. (Currently Amended) A first network device for connection to a second network device, the second network device having ~~two~~ a plurality of second ports, with ~~two~~ a plurality of links connected to the ~~two~~ plurality of second ports of the second network device, the first network device comprising:

~~two~~ a plurality of first ports for connection to the ~~two~~ plurality of links and
corresponding of the plurality of second ports;

grouping logic to determine if a new port selected from said plurality of first
ports qualifies as a trunking port and adding said new port to a trunked group if
said new port qualifies as a trunking port;

queuing logic for queuing the frames to be transmitted to ~~said~~ the second
network device;

distribution logic for evenly distributing the queued frames between said
~~two~~ first ports in said trunked group; and

transmitting logic for transmitting the queued frames from said ~~two~~ first
ports in said trunked group over said ~~two~~ plurality of links so that frames are
received at ~~said two~~ the corresponding second ports of ~~said~~ second network
device in order.

g. Claim 40 has been cancelled and replaced with the following:

40. (Currently Amended) The first network device of claim 39, further
comprising:

skew logic to cooperate with the second network device to determine the
skew value between the ~~two~~ plurality of links, and

wherein said transmitting logic uses skew value to control timing of the
transmission of frames.

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h. Claim 42 has been cancelled and replaced with the following:

42. (Currently Amended) A system for transmitting frames between two network devices, the system comprising:

a host computer;

a storage unit;

a first network device having ~~two~~ a plurality of first ports and coupled to said host computer;

a second network device having ~~two~~ a plurality of second ports and coupled to said storage unit; and

~~two~~ a plurality of links connecting said ~~two~~ plurality of first ports of said first network device to corresponding of said ~~two~~ plurality of second ports of said second network device, ~~and~~

wherein said first network device includes:

grouping logic to determine if a new port selected from said plurality of first ports qualifies as a trunking port and adding said new port to a trunked group if said new port qualifies as a trunking port;

_____ queuing logic for queuing frames to be transmitted to said second network device;

_____ distribution logic for evenly distributing the queued frames between said ~~two~~ first ports in said trunked group; and

_____ transmitting logic for transmitting the queued frames from said ~~two~~ first ports in said trunked group over said ~~two~~ plurality of links so that frames are

received at said ~~two~~ corresponding second ports of said second network device in order.

i. Claim 43 has been cancelled and replaced with the following:

43. (Currently Amended) The system of claim 35, wherein said first and second network devices include:

cooperating logic to determine the skew value between said ~~two~~ plurality of links, and

wherein said transmitting logic uses said skew value to control timing of the transmission of the frames.

j. Claim 45 has been cancelled and replaced with the following:

45. (Currently Amended) The system of claim 36, wherein said first and second network devices are Fibre Channel devices and wherein said ~~two~~ plurality of links are Fibre Channel link.

Allowable Subject Matter

2. Claims 1-7, 10-14, 20-28 and 31-45 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER P. GREY whose telephone number is (571)272-3160. The examiner can normally be reached on 10AM-7:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Moe Aung can be reached on (571)272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aung S. Moe/
Supervisory Patent Examiner, Art Unit 2616

/Christopher P Grey/
Examiner, Art Unit 2616